wOnedo

urban moving

User Manual
Electric Unicycle

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wOnedo Electric Unicycle – User Manual

This manual includes safety usage instructions.Please ensure this manual is read and understood before you use the product.

The package contains: Electric Unicycle, charger, user manual, warranty card, verification certificate, and optional parts: training wheels, bumper strip, pump, extended inflation valve, handle-bar tape and remote.

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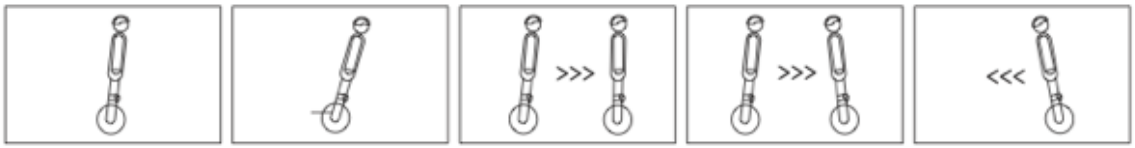
1. About Electric Unicycle

Electric unicycle is the latest high-tech means of transport adopting aerospace attitude control theory, fuzzy algorithm, and gyroscope system to achieve balance by forward and backward leaning. Users can control the vehicle to go forward, accelerate, decelerate, brake or others, by inclining forward or leaning backwards. The left and right balance is similar to the technique of riding a bicycle – achieved through slightly slanting left or right.

Electric unicycle features as a green product that can be easily carried around on a bus or subway, making it a helpful tool in commuting.



1.1 See diagram for reference

① Power switch, water proof
② Battery level indicator
③ Charger port
④ High-duty aluminum pedal (Foldable)
⑤ LED warning light (red) (optional)
⑥ LED night light (white) (optional)
⑦ Straight Screw
(to remove the plastic shell to change battery)
⑧ Bluetooth speaker (optional)
⑨ On/off button to control warning light and night light (optional)
⑩ USB port (worked as a power bank) (optional)

1.2 Training wheels installation

1.2.1 Fold up the pedal
1.2.2 Align the holes on the metal plate with the holes on the pedal
1.2.3 Screw up the screws

2. Safety

There are risks to ride or drive every vehicle. Electric unicycle is no exception. Please ensure this manual is read and understood beforehand, and do pay extra attention when riding.

Important:

1. Do not make rapid acceleration or deceleration or over incline forward or lean backwards.
2. Do not use electric unicycle if there are any risks in accidental falls. Safety first.
3. When there is alarm of low power, please decelerate at once and get down the unicycle in time, to avoid the injury caused by outage.

Please keep in mind deeply:

Most of accidents are caused by rapid acceleration or deceleration, so please avoid that. Attention:

1. Please wear helmet, gloves, elbow/knee pads or other protection garments.
2. Please check the device before every ride, to make sure no parts are loose or damaged.
3. When there is crowded pedestrians, please lower your speed similar to their walking speed.
4. When carry the device, please make sure the power is off.
5. Do not put your fingers on the tire, to avoid injuries caused by fingers stucked between the tire and the plastic shell.
6. Do not ride electric unicycle on highways and busy pavements.
7. Do not ride electric unicycle on busy roads or crowded streets.
8. Do not ride electric unicycle on rough or bumpy surfaces, such as muddy or pebbled roads.
9. Do not ride electric unicycle on wet, slippery surfaces, especially snowy roads.
10. Do not ride electric unicycle on slopes slanting more than 15° angle.
11. Do not allow children under 12 to use electric unicycle.
12. Do not ride electric unicycle in bleak winter conditions.
13. Countermarch riding is dangerous. Try to avoid countermarch.

Other sudden unpredictable risks may occur during use, please ride with care. Electric unicycle will not be responsible for any injuries caused by misuse of the product.

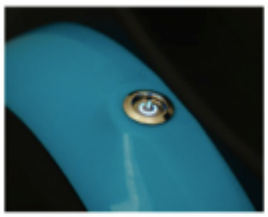
3. User Guide

3.1 Preparation for riding the electric unicycle

When you want to start your first ride of electric unicycle, please try to wear comfortable casual or sports outfit and wear flat shoes. Please bring the electric unicycle to a more spacious place, and ensure that there is not any significant obstacles.

Quick Start Guide:

Power ON/OFF

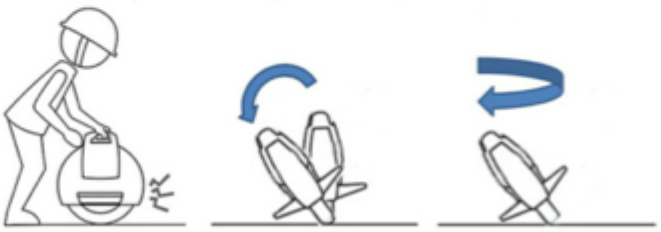


ON/OFF
<0.5S

USB power charging

Unicycle dancing

Please don't touch tire when unicycle is dancing.



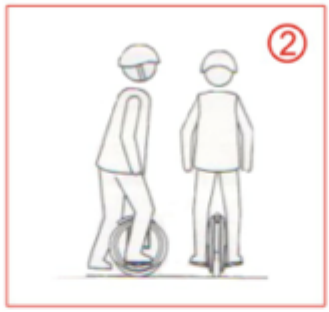
Put Unicycle on one side when power on, it will dance according to its own weight automatically with bluetooth music. sometimes slow or fast is normal.

1

Learn to ride

For different users, it may take 2-20hours to ride well

Step on one pedal, swing back and forth, feel the control hints



Lean closely to the unicycle body with the shank on pedal, shift the center-of-gravity of your body gradually on the vehicle.

With one foot on the pedal, glide with the other foot by lifting for 1-2 seconds.

3-5Meters by thrust against the ground with the other foot

With both feet on the pedal, going backward and forward via controlling the center of gravity of your body.

Make a turn by applying different force on the pedals.

3.2 Steps to riding your unicycle

1. Hold electric unicycle with one hand to make sure it perpendicular to the ground.
2. Unfold the foot platforms and press them into the down position. Place your feet parallel on both sides of the electric unicycle.
3. Put one foot on one platform and stand up straight. Shifting your weight forward, lightly push off the ground with the other foot and immediately place it on the other platform so that you straddle the unicycle, squeezing the pads between your lower legs.
4. Shift your body weight gradually forward to pick up speed. Do not lunge forward.
5. Shift your body weight backward to slow down or stop.
6. To turn, lean the wheel in the direction you want to go.
7. IMPORTANT: Twist your feet right and left for balance and steering. This is similar to maneuvering the front wheel of a bicycle. (Attempting to balance by leaning and tilting is much less effective.
8. When you are ready to get off, slow down, stop and step off with one foot; grab the handle. Keep your other foot on the other platform and turn the unicycle off.

3.3 Learning Tips

3.3.1 Use handle-bar tape to ensure your driving safety

(When you are not yet familiar with driving the electric unicycle, the Handlebar tape can help you avoid falling and scratching.)

1) Tie the handle-bar tape to self-balancing unicycle's handle. One foot on the pedal board and adjust the length of the strap to a comfortable position.

2) When you are out of balance in the process of driving, and have to jump out of the car, then you can take advantage of the handle tape to grab self-balancing unicycle to avoid the lose caused by its out of control.

3.3.2 How to control the balance

Self-balancing electric unicycle keep it forward and backward self-balancing with a gyroscope. When you lean forward, self-balancing unicycle will sense your actions to accelerate; When you lean back, self-balancing electric unicycle will control the motor slow down to maintain you and the body balance.

Self-balancing electric unicycle can not keep balance of left and right automatically, just like bike. It relies on a certain speed and your body to control the left and right balance.

Do not ride on smooth pavement or fine sand-covered roads. It needs friction of the wheel and the ground to maintain its balance.

3.3.3 How to move ahead?

Primary:

Like riding a bicycle, most of the center of gravity have shifted to self-balancing electric unicycle, so when you gently tread the pedal and the other foot tread the ground backward, self-balancing electric unicycle will go forward, just like in the previous step to keep balancing, you need try your best to keep the body balanced in the cycling process, and the other foot off ground should step on the match pedal quickly and lightly. This step requires you at least be able to ride a distance of 3-5 meters.

Intermediate ahead:

You can basically control self-balancing electric unicycle when you are in this step, which needs you to pay attention to two points: first is maintain a certain speed, secondly, control speed via lean backward and forward. We recommend that you continue to accumulate experience in the cycling process, continuous learning, when you are more confident that you can keep riding long distances then go to next step.

3.3.4 How to control the direction?

About turn: we found that beginners like to turn by moving the upper body, but result in bad effection. So we recommend that you turn the through adjust the strength of left and right foot to the pedal, that can change the inclination of the unicycle. With constant practice, you will achieve the effect of turning your expect.

4. Usage of the Self-balancing Unicycle

4.1 Battery level

A four-bar nixie tube is used to indicate battery level. All four will light up when power level is more than 85% and will go off one by one as the level decreases. Please check power level before usage to ensure there is enough power for the return trip. You may want to charge it every time after use.

When power level is lower than 15%, the buzzer will sound off, and the front part of the pedal will rise gradually to force you to decelerate and eventually stop. Please
do not restart when this occurs to avoid any accidents.

Sustained range will decrease during winter. This is because the battery performance decreases quickly in cold conditions.

4.2 Speed Control

To prevent injuries caused by speed, electric unicycles come with a speed control design. When speed exceeds 12km/h, the front part of the pedal will rise slowly; when the speed

exceeds 16km/h, there will be voice prompt about over speeding, and the pedal will rise obviously to prevent you from further acceleration. As the speed decreases, the pedal will also lower itself.

Note:

When the speed is about to reach its limit, please do not incline forward anymore to force acceleration to prevent injuries.

4.3 Side-tilting protection

When the unicycle tilts sideways more than a 45° angle, for example when it falls, the control system will activate side-tilt protection. The machine will stop running immediately to prevent injuries.

The buzzer will sound off a long buzz and the LED will flicker when this is activated. To deactivate this, turn the power off, then restart.

4.4 Charging

Plug in the power source after inserting the charger plug, otherwise the charger will not activate. This can also prevent potential risks, to ensure a safer charge.

electric unicycle provides a high-power charger. During normal conditions, only 70 mins is needed to be fully charged, while 50 mins allows 80% charged. The red light on the charger indicates charging, while green light indicates full charging.

If not in urgent need, please wait until charging complete before unplugging, because after charging, the protection circuit will perform power flow equilibrium.

4.5 Water resistance

The water resistance level of electric unicycle is IP 56, allowing it to pass through water of no deeper than 10 cm. It can be used in light rain, but do not steep the vehicle in water or take long rides in heavy rain..

5. Multi-functions

5.1 To change the battery

You can change the battery anywhere at any time by using a coin or a key. Each set of battery can achieve 15 KM or above, so you will not need to worry about the duration.

Step 1: to screw down the straight screw on the handle.

Step 2: to push up the plastic shell, then to take out the stitches, then take down the run-out battery.

Step 3: install a full-charged battery, and re-connect the wires.

Step 4: put on the plastic shell.

Step 5: to screw up the straight screw again.

5.2 Bluetooth speaker (optional)

High quality Bluetooth module and high quality speaker, make your journey more wonderful!

The built-in Bluetooth module supports connection with most of mobile phones, laptops and tablet pc.

Bluetooth matching: The Bluetooth on the unicycle is open since the power is on. So you just need open the Bluetooth on your phone/pc, then search for Bluetooth speaker.

When matching successfully, the unicycle speaker will phonate “dun”.

5.3 Power bank (optional)

USB port works as a power bank, with 5V/01A output. It can fully charge Iphone 6 at least15times.

5.4 Motion-sensor light (optional)

The night light has 4 big power LED (white light) and 4 reflection cups, to achieve remote lighting.

The warning light has 4 big power LED (red light), to remind the people around you through slow flashing and quick flashing.

There are three ways to control the night light and the warning light.

Method 1: Motion sensor

In this option, the night light and the warning light can sense the motion of the unicycle.

When the unicycle is moving forward, the two lights are on; when moving backward, the two lights are off.

Method 2: Button on the unicycle

Press the light switch button on the unicycle to control on/off.

Method 3: Button “B” on the remote control

Press the button “B” on the unicycle to control on/off.

5.5 Remote control (optional)

5.5.1 The “A” button controls the on/off of beeping noise.

5.5.2 The “B” button controls the on/off of the night light and warning light.

6. Maintenance

6.1 Storage

Please store the electric unicycle in a dry place. If left unused, recharge the battery one time per month to maintain longevity of the battery.

6.2 Inflation

Use an extended inflation tube to inflate the tire. Without the tube, you will not be able to pump air into the wheel.

6.3 Changing tires

When to repair/change the inner or outer tire, firstly disassemble the upper plastic shells on both sides, then take down the main plastic shell on the battery side, then you will be able to change the tires.

Note:

A: Plugging to power source after maintenance may cause sparks. This is normal. Do not panic.

B. Do not remove any wires and other electric parts, except the battery. Opening any part other than instructed in this manual will forfeit your warranty rights.